Contents of Volume X

Number 1, Spring 1990

FEATURES

1 **Mechanical Properties of Prestressed Thermoplastics**
H. Gust, R. Hengl, and P. Eyerer, University of Stuttgart

13 **Sheet Molding Compound—Basic Considerations**
B. Stillhard, Vickers Systems GmbH, Switzerland

23 **Biodegradable Plastics: A Review**
J.-C. Huang, A. S. Shetty, and M.-S. Wang, University of Lowell

31 **Effect of Oscillations During Extrusion on Rheology and Mechanical Properties of Polymers**
A. I. Isayev, C. M. Wong, and X. Zeng, The University of Akron

47 **A Finite Element Study of Viscoelastic Effects in Double-Layer Coextrusion of Polymer Melts**
X.-L. Luo and E. Mitsoulis, University of Ottawa

55 **Model Formulation for Material Feeding in Counter-Rotating Twin-Screw Extruders**
B. Poltersdorf and L. Fiedler, Technical University "Carl Schorlemmer" Leuna-Merseburg

61 **Knit Lines in Reaction Injection Moldings**
C. Maier, A. N. Hrymak, and P. E. Wood, McMaster University

75 **Addendum: Modeling Plug-Assist Thermoforming**
J. L. Throne, Sherwood Technologies, Inc.

77 **International Union of Pure and Applied Chemistry: Macromolecular Chemistry Division (IV), Commission on Macromolecular Nomenclature (IV.1)—List of Valid Recommendations**

DEPARTMENTS

79 **Book Reviews**

83 **Coming Event**

Number 2, Summer 1990

iii **Editorial**

FEATURES

87 **Extrusion of Polymers in the Plastic State Through Pure-Shear Convergent–Divergent Dies**
L. Mascia and J. Zhao, Loughborough University of Technology

101 **An Investigation of the Shrinkage Behavior of Oriented PVC in a Hot Air Tunnel**
D. M. Bigg, Battelle

111 **An Experimental Evaluation of Flow Distribution Models for Spiral Mandrel Dies**
J. Perdikoulias, Brampton Engineering, J. Vlcek, Compuplast, and J. Vlachopoulos, McMaster University

125 **Development of Recycling Technology for Plastic Fishing Gear—A Materials Evaluation**
S. S. Dagli, P. G. Kelleher, M. Monroy, A. Patel, and M. Xanthos, Polymer Processing Institute

135 **Measuring Spatial Fiber Orientation—A Method for Quality Control of Fiber Reinforced Plastics**
G. Fischer, P. Schwarz, U. Mueller, and U. Fritz, University of Stuttgart

143 **Blends of Polyolefins: Characteristic Melting and Crystallization Data**
S. Haghighat and A. W. Birley, Loughborough University of Technology

DEPARTMENTS

153 **Instrumentation News: Rheocalorimeter—Measures Reaction Viscosity vs. Conversion from Monomer to Polymer**
J. A. Biesenberger and D. Rosendale, Polymer Processing Institute

157 **News of the Polymer Processing Institute**

Number 3, Fall 1990

Special Issue on
Multicomponent Polymer Systems

Blends and Composites

161 **Editorial**
M. Xanthos

FEATURES

163 **Peroxide Modified Polyolefin Blends: Part I. Effects on LDPE/PP Blends with Components of Similar Initial Viscosities**
D. W. Yu, M. Xanthos, and C. G. Gogos, Polymer Processing Institute

173 **Applications for Thermotropic Liquid Crystal Polymer Blends**
D. J. Williams, The PST Group

185 **Morphology and Property Control via Phase Separation or Phase Dissolution during Cure in Multiphase Systems**
H. S.-Y. Hsich, Lord Corporation

205 **Impact Behavior of Modified PVC for Outdoor Applications**
A. A. Tseng, M. A. Borrosky, S. M. O'Connor, and J. J. Knotts, Drexel University

219 **Report on the State of the Art: Injection Molding of Fiber Reinforced Thermoplastics. Part I. Materials and Processes**
P. G. Kelleher, New Jersey Polymer Extension Center

231 **Introduction to Compatibilization of Polymer Blends**
R. L. Markham, Battelle

237 **PS–PMMA Block Copolymer System as Compatibilizer for PS–PVC Blends**
G. T. Caneba and S. Kandiraju, Michigan Technological University

DEPARTMENTS

243 **Instrumentation News: Measuring Melt Elasticity—The Melt Elasticity Indexer**
M. Xanthos and D. W. Yu, Polymer Processing Institute

245 **News of the Polymer Processing Institute**

Number 4, Winter 1990

Special Issue on
Polymer Processing
Experimental, Modeling, Simulation

249 **Editorial**
M. Xanthos

FEATURES

Articles

251 **Mathematical Modeling of the Pultrusion of Epoxy Based Composites**
A. Trivisano, A. Maffezzoli, J. M. Kenny, and L. Nicolais, University of Naples

265 **Thermomechanical Load and Property Changes in Processing of Polymeric Materials**
K. Meissner and B. Poltersdorf, Technical University Merseburg

277 **Report on the State of the Art: Injection Molding of Fiber Reinforced Thermoplastics. Part II. Design and Manufacture**
P. G. Kelleher, New Jersey Polymer Extension Center

285 **Output Computation in the Grooved-Barrel Extruder with Regard to Various Conveyance Techniques**
H. Potente, H. Stenzel, and J. Bergedieck, University of Paderborn

297 **Design and Optimization of Extrusion Dies Using Computer Based Simulations**
R. Rakos and D. Sebastion, Stevens Institute of Technology

309 **Computer Simulation and Experiments of Flow Distribution in Flat Sheet Dies**
J. Vlcek, COMPUPLAST International, G. N. Mailvaganam and J. Vlachopoulos, McMaster University, and J. Perdikoulias, Brampton Engineering

Short Communications

323 **Application of an Enhanced Flash-Tank Devolatilization System to a Degassing Extruder**
T. O. Craig, Fordel Ltd.

DEPARTMENTS

327 **Instrumentation News: Measurement of Solubility of Gases in Polymer Melts**
S. K. Dey, Polymer Processing Institute

329 **News of the Polymer Processing Institute**

335 **Volume Contents**

339 **Author Index**